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- (a) drawing a sample of specified volume from a cleaning bath,
  - (b) determining alkalinity of the sample using the acid-base reaction with an acid, the determining step being performed by a measuring device, and
  - (c) outputting the result of step (b).

Please add new Claim 36 as follows:

C2

--36. (New) The process of Claim 1 further comprising the step of adding one or more replenishing components to the cleaning bath if the result of step (b) is below a preset value.--

#### REMARKS

Favorable reconsideration and allowance of the claims as presented herein in view of the foregoing amendment and the following remarks are respectfully requested.

Claims 1 and 15-36 are pending. By this Amendment, Claim 1 has been amended for clarification and new Claim 36 has been added. Applicants have attached hereto Appendix A containing a marked up version of original Claim 1. Applicants respectfully submit that no new matter has been added to the subject application nor have any new issues been raised by this amendment. Moreover, it is submitted that the claims as now presented place the subject application in condition for immediate allowance.

The Examiner has rejected Claims 1, 15-22, 24-25 and 27-35 under 35 U.S.C. §102(b) as being anticipated by Whitesell U.S. Patent No. 3,674,672 ("Whitesell"). This rejection is respectfully traversed.

Nowhere does Whitesell disclose or suggest a process for the automatic determination of the alkalinity of one or more cleaning baths containing a surfactant employing the step of "determining alkalinity of the sample using an acid-base reaction with an acid" as generally recited in amended Claim 1.

Rather, Whitesell discloses a multiparameter analysis system for the measurement and correction of a process solution by analyzing the ion concentration of a process solution to determine the content of ions in the solution and make necessary corrections. At no point is there any disclosure or suggestion in Whitesell of determining the alkalinity of a cleaning bath using an acid-base reaction with an acid. In point of fact, the example of Whitesell discloses determining the concentration of  $\text{NO}_2$  ion in solution utilizing a titrating reagent for the ceric ion in the form of *ceric sulfate*, which is 0.01 normal with respect to the ceric ion. (See specification at col. 7, line 69 to col. 8, line 21.) As one skilled in the art would readily recognize, the relevant ion in a standard acid-base titration is the  $\text{H}^+$  ion, not the ceric ion. Accordingly, there is no remote disclosure, suggestion or even a hint in Whitesell of conducting an acid-base reaction using an acid to determine the alkalinity of a cleaning bath.

Thus, the Examiner has failed to meet his burden of establishing where Whitesell specifically discloses each and every element of applicants' claims, by citing

nearly the entire specification (col. 4, lines 27 - col. 12, line 32) in support of his assertion that Whitesell anticipates applicants' claims. To the extent the Examiner repeats this assertion in the next office action, it is respectfully requested that the Examiner identify with particularity (i.e., by column and line number) where, in fact, Whitesell discloses each of the specifically recited steps in the process as set forth in amended Claim 1.

Moreover, there appears to be some confusion in the Office Action with respect to the difference between "alkalinity" and "pH". According to the Examiner's statement in the Office Action, applicants' claimed process employs the step "determining the alkalinity, *or pH*, of the sample by using an acid-base reaction with an acid". However, applicants' claimed process does not employ the step of determining the pH of the sample. Rather, the presently claimed process employs the step of "determining *alkalinity* of the sample using an acid-base reaction with an acid". As one skilled in the art would readily recognize, one does not measure pH using an acid-base reaction with an acid. Instead, one can measure pH subsequent to an acid-base reaction to determine the presence of H<sup>+</sup> ions, but this is *not* the same as measuring alkalinity using an acid-base reaction with an acid as presently recited in amended Claim 1.

As noted on page 5 of the specification, the alkalinity determination is with respect to free alkalinity or total alkalinity. One skilled in the art familiar with cleaning baths and the use of the term "alkalinity" in connection therewith would readily

appreciate that "free alkalinity" is the measure of a cleaner's concentration and is utilized as an indication of a bath's ability to remove soil from the surface, and "total alkalinity" is a measurement of the cleaner bath's total concentration of active materials as well as contaminants. (See, e.g., glossary terms published by the Electrocoat Association, found at [www.electrocoat.org/glossary.html](http://www.electrocoat.org/glossary.html), attached hereto as Exhibit 1.)

Furthermore, the simple measurement of pH is not sufficient to determine free or total alkalinity, as alkalinity depends upon the presence of buffering components. For example, the fact that the pH of a coating solution is 11 does not adequately describe its alkalinity, as it cannot provide the amount of acid that would be needed to lower the pH to, e.g., 8, for defining the free alkalinity of the sample. The pH measurement is merely an aid to determine the alkalinity, but it does not, as the Examiner asserts, have the same meaning as free or total alkalinity, and would not be determined by an acid-base reaction with an acid. As Whitesell is completely silent to the step of determining alkalinity of the sample by using an acid-base reaction with an acid as presently recited in amended Claim 1, Whitesell cannot possibly anticipate Claims 1, 15-22, 24, 25 and 27-35.

For the foregoing reasons, Claims 1, 15-22, 24, 25 and 27-35 and new Claim 36 are believed to be patentable over Whitesell. Accordingly, withdrawal of the rejection of Claims 1, 15-22, 24, 25 and 27-35 under 35 U.S.C. § 102(b) is warranted and such is respectfully requested.

The Examiner has rejected Claims 23 and 26 under 35 U.S.C. §103(a) as being obvious over Whitesell. This rejection is respectfully traversed.

The foregoing deficiencies of Whitesell discussed above with respect to the rejection of Claim 1 apply with equal force to this rejection. As Whitesell does not disclose or suggest each of the steps of Claim 1, Whitesell cannot possibly disclose or suggest the steps of Claims 23 and 26, which ultimately depend from Claim 1. In fact, the Examiner even acknowledges in the Office Action that Whitesell does not teach the steps of applicants' Claims 23 and 26. Accordingly, as Claims 23 and 26 contain all of the limitations of Claim 1 and, therefore, for at least the reasons noted above with respect to the rejection of Claim 1, it is respectfully submitted that Whitesell fails to make obvious Claims 23 and 26.

Additionally, the statement in the Office Action that the motivation for one of ordinary skill in the art to incorporate the steps of Claims 23 and 26 into the process of Whitesell would have been "to provide continuous real-time monitoring for effective process control" is *wholly unsupported* and cannot possibly serve as a basis for this rejection. The Examiner is respectfully requested to adequately explain and with particularity the reason(s) why one skilled in the art would have been motivated to incorporate the steps of Claims 23 and 26 into the process of Claim 1.

Accordingly, withdrawal of the rejection of Claims 23 and 26 under 35 U.S.C. §103(a) is respectfully requested.

For the foregoing reasons, amended Claims 1, 15-22, 24, 25 and 27-36 as presented herein are believed to be in condition for immediate allowance. Such early and favorable action is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael E. Carmen". The signature is fluid and cursive, with the first name "Michael" and last name "Carmen" being clearly legible.

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AMENDED CLAIMS MARKED TO SHOW CHANGES

1. (Twice Amended) A process for automatic determination of the alkalinity of one or more cleaning baths containing surfactant the process comprising the following steps, performed under program control,

- (a) drawing a sample of specified volume from a cleaning bath,
- (b) determining alkalinity of the sample using the acid-base reaction with an acid, the determining step being performed by a measuring device, and
- (c) outputting the result of step (b).